

In the Specification

Please substitute the following paragraphs on page 67, beginning at line 16 through to page 68, line 24:

Additional preferred microsequencing primers for particular genic PG1-related biallelic markers include a polynucleotide selected from the group consisting of the nucleotide sequences from position N-X to position N-1 of SEQ ID NO:179, nucleotide sequences from position N+1 to position N+X of SEQ ID NO:179, and the compliments thereof, wherein X is equal to 15, 18, 20, 25, 30, or a range of 15 to 30, and N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; ~~5160~~ 35160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; and 54541.

The probes of the present invention is designed from the disclosed sequences for any method known in the art, particularly methods which allow for testing if a particular sequence or marker disclosed herein is present. A preferred set of probes is designed for use in the hybridization assays of the invention in any manner known in the art such that they selectively bind to one allele of a biallelic marker, but not the other under any particular set of assay conditions. Preferred hybridization probes may consists of, consist essentially of, or comprise a contiguous span which ranges in length from 8, 10, 12, 15, 18 or 20 to 25, 35, 40, 50, 60, 70, or 80 nucleotides, or be specified as being 12, 15, 18, 20, 25, 35, 40, or 50 nucleotides in length and including a PG1-related biallelic marker of said sequence. Optionally either of the two alleles specified in the definition of PG1-realtd biallelic marker is specified as being present at the biallelic marker site. Optionally, said biallelic marker is within 6, 5, 4, 3, 2, or 1 nucleotides of the center of the hybridization probe or at the center of said probe. A preferred set of hybridization probes is disclosed in SEQ ID NOs: 21-38, 57-62, 185-338, and the compliments thereof. Another particularly preferred set of hybridization probes includes the polynucleotides from position X to position Y of any one of SEQ ID NOs: 21-

38, 57-62, 185-338, or the compliments thereof, wherein X is equal to 5, 8, 10, 12, 14, 16, 18 or a range of 5 to 18, and Y is equal to 30, 32, 34, 36, 38, 40, 43 or a range of 30 to 43; preferably X equals 12 and Y equals 36. Additional preferred hybridization probes for particular genic PG1-related biallelic markers include a polynucleotide selected from the group consisting of the nucleotide sequences from position N-X to position N+Y of SEQ ID NO:179, and the compliments thereof, wherein X is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30, Y is equal to 8, 10, 12, 15, 20, 25, or a range of 8 to 30, and N is equal to one of the following values: 2159; 2443; 4452; 5733; 8438; 11843; 1983; 12080; 12221; 12947; 13147; 13194; 13310; 13342; 13367; 13594; 13680; 13902; 16231; 16388; 17608; 18034; 18290; 18786; 22835; 22872; 25183; 25192; 25614; 26911; 32703; 34491; 34756; 34934; ~~5160~~ 35160; 39897; 40598; 40816; 40947; 45783; 47929; 48206; 48207; 49282; 50037; 50054; 50101; 50220; 50440; 50562; 50653; 50660; 50745; 50885; 51249; 51333; 51435; 51468; 51515; 51557; 51566; 51632; 51666; 52016; 52096; 52151; 52282; 52348; 52410; 52580; 52712; 52772; 52860; 53092; 53272; 53389; 53511; 53600; 53665; 53815; 54365; and 54541; wherein the nucleotide at position N is selected from one of the two alleles specified in the definition of PG1-realtd biallelic marker at the biallelic marker site at position N.